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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,507	01/11/2002	Makarand P. Gore	10012194 -1	9291

7590 05/18/2005

HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
P.O. Box 272400  
Fort Collins, CO 80527-2400

EXAMINER
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MERCADO, JULIAN A

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 05/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/044,507

Applicant(s)

GORE ET AL.

Examiner

Julian Mercado

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,6-15 and 19 is/are rejected.
- 7) ☐ Claim(s) 3-5, 16-18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 18, 2005 has been entered.

### ***Claim Rejections - 35 USC § 102 and 103***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2 and 19 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hockaday et al. (U.S. 2001/0049045 A1).

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Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hockaday et al. as applied to claims 1, 2 and 19 above, in view of Vieira et al. (U.S. Pat. 5,098,477).

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hockaday et al. as applied to claims 1, 2 and 19 above, in view of Bauer (U.S. Pat. 4,523,852).

Claims 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hockaday and Vieira et al. as applied to claims 1, 2, 6, 7 and 19 above, and further in view of Bauer.

Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hockaday et al. as applied to claims 1, 2 and 19 above, in view of Beecher et al. (U.S. Pat. 5,192,984)

The above rejection(s) are maintained for the reasons of record. The examiner notes applicant's amendment further reciting that the dye or dye mixture has a characteristic wavelength of light absorption or light emission that changes in response to changes in fuel concentration. However, the dye mixture in Hockaday et al. is maintained responsive to changes in fuel concentration as evident by the darker dye color as the solvent concentration decreases. Based on this observable phenomenon, the dye mixture would naturally flow to inherently have a wavelength of light absorption or light emission responsive to the fuel concentration, absent of a showing by applicant that the claimed invention distinguishes over the reference. *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977) and *In re Spada*, 15 USPQ 2d 1655 (Fed. Cir. 1990) The basis for the examiner's reasoning may be found in the Beer-Lambert Law  $A = \epsilon b c$  where

- $A$  --- absorbance (no units,  $A = \log_{10} P_0 / P$ )
- $\epsilon$  --- molar absorptivity or extinction coefficient ( $L \text{ mol}^{-1} \text{ cm}^{-1}$ )
- $b$  --- path length of the sample (cm)
- $c$  --- concentration of the compound in solution ( $\text{mol L}^{-1}$ )

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This rejection is therefore set forth to the extent that applicant's claim recites in the alternative a wavelength of light absorption or light emission for the dye mixture. Thus, Hockaday et al. is considered to read on the claim to the extent that the light emission, i.e. observed dye color, based on the absorbance value  $A$  is a function of the concentration  $c$  of the fuel solution. As set forth in a prior Office action, the examiner asserts that when the volume of the fuel *solvent* changes, the concentration of the fuel *solution* changes in that the dye mixture *solute* present in the fuel *solvent* is now present in a more concentrated amount. [emphasis added] In Hockaday et al., it is clear that a causal relation exists between the observed dye color and the concentration of fuel solution.

Applicant's arguments have been fully considered, however they are not persuasive. Applicant submits that the dye in Hockaday et al. is not responsive to a change in fuel concentration while also pointing out that this distinction was already pointed out in the prior response. In reply, the examiner equally asserts that the basis for Hockaday et al. being readable on the claimed dye being responsive to a change in fuel concentration has also been discussed in detail in a prior Office action. To reiterate, the examiner concedes that, indeed, in Hockaday et al. the volume of the methanol/water solution decreases. However, the dye mixture in Hockaday et al. is asserted as being responsive to the fuel concentration to the extent that the dye quantity resultantly appears darker as the methanol/water solution decreasingly changes.

The examiner notes that applicant's arguments appear as being premised on the instant dye being "chemically responsive." For the reasons set forth in the December 27, 2004 Interview Summary, the examiner maintains that this feature, if claimed, would obviate Hockaday et al.

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The examiner also notes that no arguments directed towards the secondary references Vieira et al., Bauer and Beecher et al. were submitted in the present amendment.

***Allowable Subject Matter***

Claims 3-5 and 16-18 are maintained objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

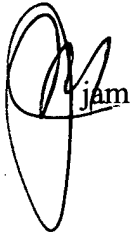
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian Mercado whose telephone number is (571) 272-1289. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



**GREGG CANTELMO  
PRIMARY EXAMINER**